

2004 Stormwater Management Status Report on the Municipal Separate Storm Sewer System (MS4) for Fairfax County, Virginia

I. Watershed Management Planning

Fairfax County's Watershed Management Program includes conformance to regulations, development and enforcement of policies, watershed planning, establishment of engineering design criteria, safety aspects, land rights and restrictions, performance, and maintainability. The county recognizes that alternatives to achieving water quality improvement goals have to be addressed continuously in order to provide environmentally sensitive and more cost effective programs and projects for its citizenry. The primary objective of the Stormwater Planning Division (SWPD) is to develop and implement comprehensive stormwater management plans and to provide input to current countywide policies affecting ecosystem and stormwater management issues. The SWPD promotes policies to improve and protect the quality of life and support environmental goals of the county. It is working to develop a framework that will address the overall environmental goals and objectives of the county and also ensure a link between regulations and project implementation through the planning, design, construction, and maintenance phases. The county's structural stormwater control program involves the collection, detention, and control of stormwater discharge with the objective of meeting the overall goal of reducing phosphorous discharge levels by 40 percent (50 percent in the Water Supply Protection Overlay District). A key requirement for controlling stormwater discharge is to limit post-development runoff to that which does not exceed pre-development runoff rates. This is accomplished through a variety of means and Best Management Practices (BMPs), including on-site detention and regional ponds, ponds incorporating water quality treatment, PL-566 lakes, underground chambers, percolation trenches, roof top storage, and other techniques. The county is pursuing the adoption of Low Impact Development (LID) techniques as a new approach to managing stormwater runoff closer to the source and restoring pre-development hydrological conditions.

Watershed Management Plans

The Stormwater Planning Division of DPWES is leading the effort to develop watershed management plans for all 30 adopted watersheds within the county. Watershed plan development for entire watersheds, sub-watersheds, and/or groupings of watersheds is anticipated to be completed over a three-to five-year period. The watershed plans are expected to provide an assessment of stormwater conditions, encourage public involvement, and prioritize recommendations for implementation within each watershed. There are several goals for the development of watershed management plans. These goals include protecting and meeting state and federal water quality standards by identifying strategies to prevent and remove pollution, to support Virginia's commitment under the Chesapeake Bay 2000 agreement to clean up and restore the Bay, to replace the current 1970s-era watershed management plans, and to restore and protect the county's streams and enhance property values. Additionally, these plans will provide a consistent basis for the evaluation and implementation of solutions for protecting and restoring the health of receiving water, the ecological systems, and other natural resources of the County.

The development of comprehensive watershed management plans commenced in 2003 with the Little Hunting Creek Watershed. The plans are expected to include at least the following tasks: 1) Review and synthesis of previous studies and data compilation; 2) Evaluation of current conditions and a projection of ultimate development conditions; 3) Development of non-structural and structural watershed management alternatives; 4) Capital project implementation options including preliminary cost estimates, cost/benefit analysis, and prioritization; 5) Public Involvement Program; and 6) Documentation of watershed management plan. The status of current watershed planning projects in 2004 is as follows:

Cameron Run

The Cameron Run watershed management planning process was initiated in 2003. A steering committee, comprised of approximately fifteen watershed residents representing diverse interests, was formed to assist in developing the plan. The committee has met for the past eighteen months to identify problems with degraded streams and other natural resources in Cameron Run and consider a number of alternative solutions for protecting and restoring these resources. An issue scoping forum was held in June, 2004, to gain input from watershed residents on the types and locations of watershed problems. A tour of the Cameron Run watershed was conducted for interested citizens in July, 2004. Water quality Best Management Practices (BMPs) implemented by the Lake Barcroft Watershed Improvement District (LBWID) in the Tripps Run subwatershed were visited. A green roof and biofiltration rain garden constructed at Yorktowne Square Condominiums in the Holmes Run subwatershed were also part of the tour.

A community forum was held in October, 2004, to educate the public on the condition of the watershed and obtain further input on potential solutions to identified problems. Fairfax County has entered into a cooperative agreement with the Corps of Engineers and City of Alexandria to complete a more comprehensive watershed study that includes portions of Cameron Run outside the county. This will place the county in a favorable position to leverage federal government funds in the future for project implementation in the Cameron Run watershed. A draft watershed management plan is expected to be available for public comment by June, 2005, and a final plan completed by fall of 2005.

Cub Run/Bull Run Watershed

The Cub Run watershed management planning process began in 2004. The watershed plan is being developed with guidance from a steering committee comprised of approximately 28 residents representing diverse groups and interests in the watershed. The committee has met over the past year to help identify problems in the watershed, develop solutions, and review the watershed management plan. One public forum and watershed tour has been held for residents living, working, and recreating in the watershed to collect information about problem areas and raise awareness about issues facing Cub Run. The final watershed management plan for Cub Run is scheduled to be complete by early 2006.

Difficult Run Watershed

The Difficult Run watershed management planning process began in 2004 with the formation of a steering committee comprised of approximately 20 stakeholders representing diverse groups and interests in the watershed. The committee has attended monthly meetings and hosted an issue scoping forum to help identify problems in the watershed such as flooding, stream erosion, and poor water quality. Additionally, a watershed tour was conducted for those committee members who wanted to assess stream quality in Difficult Run first-hand. The committee is working with the county to coordinate a second public forum to educate residents living, working, and recreating in the watershed about watershed basics in order to prepare them to provide informed feedback on the future draft watershed management plan. The committee is simultaneously identifying areas for remediation and researching solutions such as implementing low impact development to the problems facing the watershed. The next step for the committee will be to work with the county and consultants to draft the watershed management plan for

Difficult Run and host two public forums to gain important feedback on the plan from residents. The final watershed management plan is slated for completion by early 2006.

Little Hunting Creek Watershed

The Little Hunting Creek watershed management planning process began in 2003. The watershed plan was developed with guidance from a steering committee comprised of approximately fifteen residents representing diverse groups and interests in the watershed. The committee met for over one and a half years to help identify problems in the watershed, develop solutions, and review the watershed management plan. Four public forums were held for residents living, working, and recreating in the watershed in order to collect information about problem areas in the watershed, raise awareness about issues facing Little Hunting Creek, and get feedback regarding the draft watershed management plan. The final watershed management plan for Little Hunting Creek was approved by the Board of Supervisors on February 7, 2005. The plan includes a myriad of projects endorsed by residents such as stream restoration, rain barrel implementation, riparian vegetation buffer restoration, water quality improvements to existing stormwater facilities, and recommended modifications to the County Code and other supporting documents such as the Public Facilities Manual for the improvement of watersheds. Approximately nineteen projects are now under the design and implementation phase.

Additional projects and other recommendations of the plan will be initiated and funded through the annual budget process. The total cost of complete implementation of the plan over 25 years is estimated at \$30.4 million. Of that amount, \$26.6 million is attributed to project implementation costs and \$3.8 million is for development of policies and subsequent administration of newly adopted policies.

Pimmit Run and Middle Potomac Watersheds

The Pimmit Run and Middle Potomac watershed management plan encompasses five separate watersheds: Pimmit Run, Bull Neck Run, Scott's Run, Dead Run, and Turkey Run. The 18-month process began in 2004 with the formation of a steering committee comprised of approximately 20 stakeholders representing diverse backgrounds and interests in these five watersheds. The committee has attended three meetings and recently hosted one public issue forum to help identify the key problems in each watershed such as flooding, stream erosion, and poor water quality. Once these key issues are identified, the committee and consultants will begin the process of determining means to address these problems. The committee is working with the county to coordinate an informative watershed walk and a second public forum for this spring. It will educate residents living, working, and recreating in the watershed in basic watershed ecology in order to prepare them to provide informed feedback on the future draft watershed management plan. The next step for the committee will be to work with the county and consultants to draft the watershed management plan for Pimmit Run and Middle Potomac watersheds and host another public forum to gain important feedback on the plan from residents. The final watershed management plan is slated for completion in spring, 2006.

Popes Head Watershed

The Popes Head Creek watershed management planning process began in 2003. A steering committee, comprised of approximately 17 watershed residents representing diverse interests, was formed to assist in developing the plan. The committee has been meeting to help identify problems in the watershed, develop solutions, and review the watershed management plan. In addition, three public forums have been held for residents living, working, and recreating in the watershed. The first public meeting, the issues scoping forum held in January of 2004, collected information about problem areas in the watershed and raised awareness about issues facing Popes Head Creek. In March, 2004, the second public forum was the community watershed forum, which was aimed at disseminating information related to the issues identified in the watershed and facilitated discussions with watershed residents. The third public meeting, the watershed draft plan workshop, was held in October, 2004 and gave the residents an opportunity to review and provide feedback regarding the draft version of the Popes Head Creek Watershed

Management Plan. A final committee meeting is planned prior to the Final Popes Head Creek Watershed Management Plan public workshop, which will be held in April, 2005, and will focus on final comments and recommendations related to the completion of the watershed plan. The plan is expected to be submitted for approval by the Board of Supervisors sometime in summer 2005. The plan includes various projects endorsed by residents such as stream restoration, low impact development projects, riparian vegetation buffer restoration, water quality improvements to existing stormwater facilities, road and culvert improvements, and recommended modifications to the County Code and other supporting documents such as the Public Facilities Manual for the improvement of the watershed. Project cost estimates are currently being developed for all projects proposed in the plan. Projects and other recommendations of the plan will be initiated and funded through the annual budget process. Implementation of the plan will occur over the next 25 years.

Other Watersheds

Other comprehensive watershed management plans anticipated to be started in 2005 include Accotink Creek, Dogue Creek, Little Rocky Run/Johnny Moore Creek, Pohick Creek, and Sugarland Run/Horsepen Creek. Consideration is currently being given to accelerate the development of the remaining plans to complete all county watershed plans by 2008.